

REMARKS

Claims 1 - 34 are pending in the application. Claims 1, 11 and 21 are independent claims.

Independent claim 1 has been amended to clarify the claim language and make explicit what was implicit earlier, namely the processing of the measurements to determine an ending time of the processing time window. Support for this is found in Figure 5 and paragraph [0025] of the filed application.

Dependent claims 8 and 9 have been amended to conform to the language of amended claim 1.

Independent claim 11 has been amended in a manner similar to claim 1.

Dependent claims 18-20 have been amended to conform to the language of amended claim 11.

Claims 21-28 have been canceled.

Dependent claims 29-34 have been amended to depend upon apparatus claim 11/ No new matter has been added by the amendments. Reconsideration of the application as amended is respectfully requested. The Examiner's rejections are addressed in substantially the same order as in the referenced office action.

REJECTION UNDER 35 USC 102

Claims 1-5, 8-16, 18-25, 27-30 and 32 stand rejected under 35 USC § 102(e) as

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being anticipated by *Tiller* et al. (US 20030138067). Claims 1, 11 and 21 are independent claims.

The present invention is a method and apparatus for determining a parameter of interest of an earth formation with a logging tool having a pulsed source used to irradiate the earth formation. A detector spaced apart from the source the results of interaction of said irradiating with said earth formation. The received signals are analyzed using a processor that defines a starting time for analysis at a time at which non-formation effects are small and an ending time for analysis at a time at which the signals are statistically significant.

As the Examiner has noted, *Tiller* discloses many of the elements of the claimed invention. Independent claim 1, as amended, includes processing the measurements for determining an ending time for a processing time window at which the measurements are substantially uncontaminated by noise. The Examiner has cited paragraph [0041] of *Tiller* as defining "an end time t_3 for a processing time window 52 at which the detection is substantially uncontaminated by noise."

Applicant respectfully disagrees. The ending time window in *Tiller* appears to be a fixed time based on *ad hoc* principles. A word search of *Tiller* shows a single use of the word "noise" in a context totally unrelated to determination of the ending time of a processing window (see paragraph [0006]). There is no teaching or suggestion in *Tiller*

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of determining an ending time of a processing window based on processing of the measurements. There is no teaching in *Tiller* of determining an ending time based on noise.

In order for a claimed invention to be unpatentable under 35 USC § 102, a single prior art reference must disclose each and every claim element arranged as in the claim. This is clearly lacking in the present case. Accordingly, applicant respectfully submits that claim 1 and claims 2-5 and 7-10 that depend upon claim 1 are patentable under 35 USC §102 over *Tiller*.

Applicant further notes that with respect to claim 2, applicant disagrees with the Examiner's assertion that paragraph [0041] discloses defining a starting time based on a value of the measurements to the parameter of interest at the ending time of an earlier processing window. All that is disclosed is a natural logarithm of a gamma ray intensity and a window 52 which includes times t_2 and t_3 .

In any case, claim 2 requires use of an estimated value of a parameter of interest at an ending time of a processing time window for an earlier operation of the source.

Applicant further notes that none of the prior art of record discloses or suggests the particular elements of claim 1 discussed above. Accordingly, claim 1 and claims 2-5 and 7-10 are also patentable under 35 USC §103 over *Tiller* and the prior art of record.

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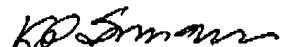
Independent claim 11 includes the substantive limitations of claim 1 discussed above. Accordingly, claim 11 and claims 12 -20 and 29- 34 are patentable under 35 USC §§ 102-103 over *Tiller* and the prior art of record for the same reasons that claim 1 is patentable under 35 USC §§ 102-103 over *Tiller* and the prior art of record.

REJECTION UNDER 35 USC §103

Claims 31 and 33-34 stand rejected under 35 USC §103 over *Tiller* in view of *Randall* (US 4645926). The patentability of these claims over the prior art of record has been discussed above with reference to the rejection under 35 USC § 102.

The Commissioner is hereby authorized to charge any fee due for these amendments to Deposit Account No. 02-0429 (584-35673)

Respectfully submitted,



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